



**Micro Commercial Components**



Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

**P4KE6.8(C)A  
THRU  
P4KE550(C)A**

## Features

- Halogen free available upon request by adding suffix "-HF"
- Unidirectional And Bidirectional
- Low Zener Imdepance
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- For Bidirectional Devices Add "C" To The Suffix Of The Part Number: i.e. P4KE6.8C or P4KE6.8CA for 5% Tolerance Devices
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)

**400 Watt  
Transient Voltage  
Suppressors  
6.8 to 550 Volts**

## Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C
- P<sub>PPM</sub>=400 Watt (Peak Pulse Power Dissipation at Ta=25 °C)
- Response Time 1 x 10<sup>-12</sup> Seconds For Unidirectional and 5 x 10<sup>-9</sup> For Bidirectional
- P<sub>M(AV)</sub>=1W(Steady state Power Dissipation at TL=75°C)
- IFSM=40A(Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed On Rated Load.

**DO-41**

The diagram shows a cross-section of a DO-41 package. Dimension A is the height of the main body, B is the diameter of the main body, C is the diameter of the lead, and D is the total height including the lead. A cathode mark is indicated on the main body.

DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

## Mechanical Data

- UL Recognized File # E331408
- Polarity :Color band denotes cathodes except Bipolar
- Mounting position :Any
- Weight :0.012ounce,0.3grams

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

## Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating Curve

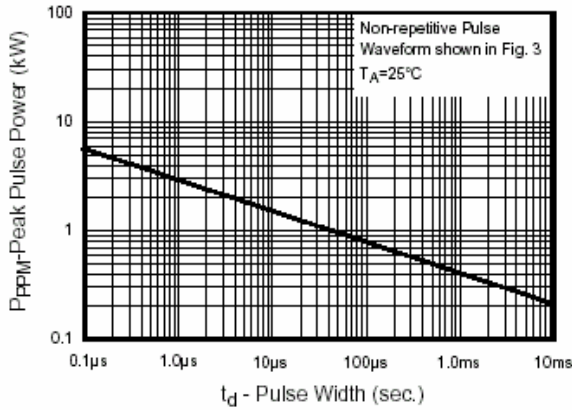


Fig.2 - Pulse Derating Curve

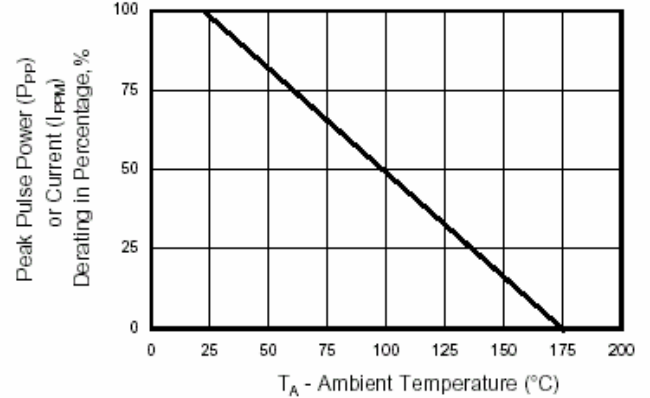


Fig.3 - Pulse Waveform

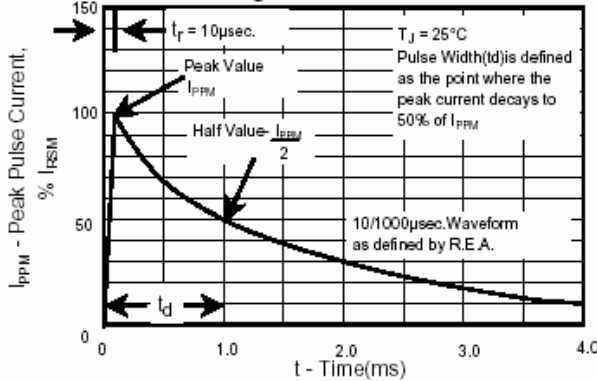


Fig.4 - Typ. Junction Capacitance Uni-Directional

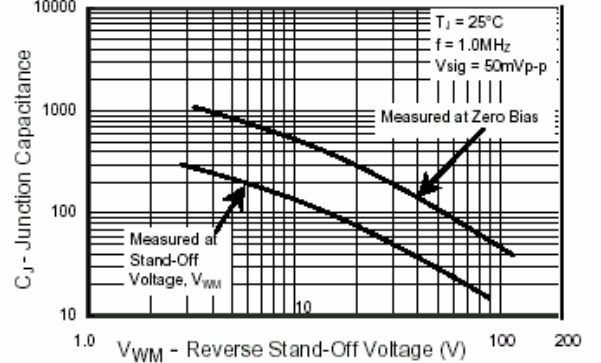


Fig.5 - steady State Power Derating Curve

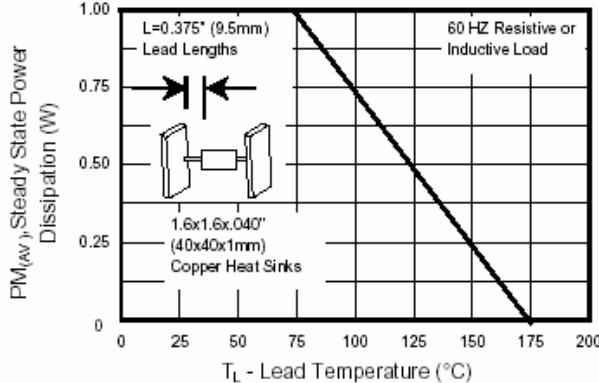


Fig.6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

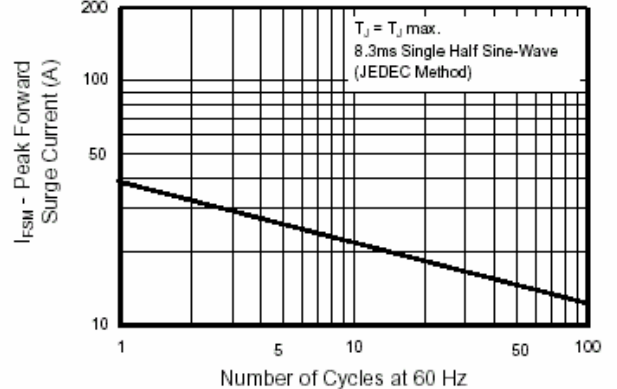


Fig.7 - Typical Reverse Leakage Characteristics

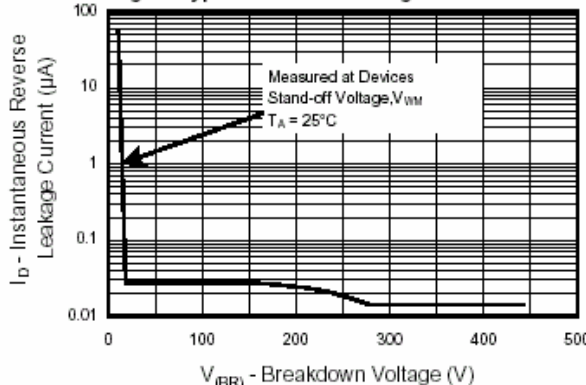
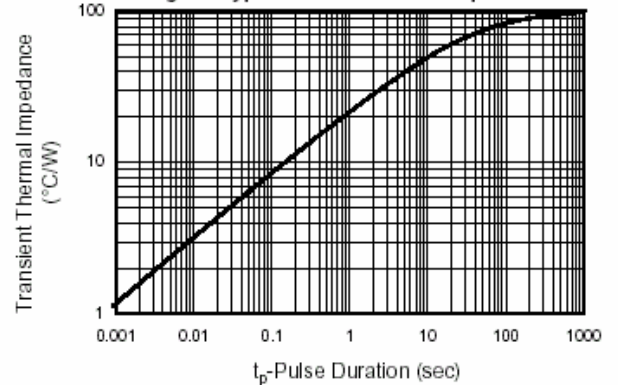


Fig. 8 - Typ. Transient Thermal Impedance



# P4KE6.8A thru P4KE550A



## ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

MCC		Breakdown Voltage		TEST Current I <sub>T</sub>	Reverse Standoff Voltage V <sub>WM</sub>	Maximum Reverse Leakage I <sub>R</sub> @V <sub>WM</sub>	Maximum Clamping Voltage V <sub>c</sub> @I <sub>pp</sub>	Maximum Peak Pluse Current (I <sub>pp</sub> )	Maximum Temperature Coefficient Of V <sub>(BR)</sub>
Part Number		V <sub>(BR)</sub> @I <sub>T</sub> (Volts)							
Uni-Polar	Bi-Polar	Min	Max	mA(DC)	V	uA	V	A	(%/°C)
P4KE6.8A	P4KE6.8CA	6.45	7.14	10	5.8	1000	10.5	39	0.057
P4KE7.5A	P4KE7.5CA	7.13	7.88	10	6.4	500	11.3	36.3	0.061
P4KE8.2A	P4KE8.2CA	7.79	8.61	10	7.02	200	12.1	33.9	0.060
P4KE9.1A	P4KE9.1CA	8.65	9.55	1	7.78	50	13.4	30.6	0.068
P4KE10A	P4KE10CA	9.5	10.5	1	8.55	10	14.5	28.3	0.073
P4KE11A	P4KE11CA	10.5	11.6	1	9.4	5	15.6	26.3	0.075
P4KE12A	P4KE12CA	11.4	12.6	1	10.2	5	16.7	24.6	0.078
P4KE13A	P4KE13CA	12.4	13.7	1	11.1	1	18.2	22.5	0.081
P4KE15A	P4KE15CA	14.3	15.8	1	12.8	1	21.2	19.3	0.084
P4KE16A	P4KE16CA	15.2	16.8	1	13.6	1	22.5	18.2	0.086
P4KE18A	P4KE18CA	17.1	18.9	1	15.3	1	25.5	16.1	0.088
P4KE20A	P4KE20CA	19	21	1	17.1	1	27.7	14.8	0.090
P4KE22A	P4KE22CA	20.9	23.1	1	18.8	1	30.6	13.4	0.092
P4KE24A	P4KE24CA	22.8	25.2	1	20.5	1	33.2	12.3	0.094
P4KE27A	P4KE27CA	25.7	28.4	1	23.1	1	37.5	10.9	0.096
P4KE30A	P4KE30CA	28.5	31.5	1	25.6	1	41.4	9.9	0.097
P4KE33A	P4KE33CA	31.4	34.7	1	28.2	1	45.7	9	0.098
P4KE36A	P4KE36CA	34.2	37.8	1	30.8	1	49.9	8.2	0.099
P4KE39A	P4KE39CA	37.1	41	1	33.3	1	53.9	7.6	0.100
P4KE43A	P4KE43CA	40.9	45.2	1	36.8	1	59.3	6.9	0.101
P4KE47A	P4KE47CA	44.7	49.4	1	40.2	1	64.8	6.3	0.101
P4KE51A	P4KE51CA	48.5	53.6	1	43.6	1	70.1	5.8	0.102
P4KE56A	P4KE56CA	53.2	58.8	1	47.8	1	77	5.3	0.103
P4KE62A	P4KE62CA	58.9	65.1	1	53	1	85	4.8	0.104
P4KE68A	P4KE68CA	64.6	71.4	1	58.1	1	92	4.5	0.104
P4KE75A	P4KE75CA	71.3	78.8	1	64.1	1	103	4	0.105
P4KE82A	P4KE82CA	77.9	86.1	1	70.1	1	113	3.6	0.105
P4KE91A	P4KE91CA	86.5	95.5	1	77.8	1	125	3.3	0.106
P4KE100A	P4KE100CA	95	105	1	85.5	1	137	3	0.106
P4KE110A	P4KE110CA	105	116	1	94	1	152	2.7	0.107
P4KE120A	P4KE120CA	114	126	1	102	1	165	2.5	0.107
P4KE130A	P4KE130CA	124	137	1	111	1	179	2.3	0.107
P4KE150A	P4KE150CA	143	158	1	128	1	207	2	0.108
P4KE160A	P4KE160CA	152	168	1	136	1	219	1.9	0.108
P4KE170A	P4KE170CA	162	179	1	145	1	234	1.8	0.108
P4KE180A	P4KE180CA	171	189	1	154	1	246	1.7	0.108
P4KE200A	P4KE200CA	190	210	1	171	1	274	1.5	0.108
P4KE220A	P4KE220CA	209	231	1	185	1	328	1.3	0.108
P4KE250A	P4KE250CA	237	263	1	214	1	344	1.2	0.110
P4KE300A	P4KE300CA	285	315	1	256	1	414	1	0.110
P4KE350A	P4KE350CA	332	368	1	300	1	482	0.85	0.110
P4KE400A	P4KE400CA	380	420	1	342	1	548	0.75	0.110
P4KE440A	P4KE440CA	418	462	1	376	1	602	0.68	0.110
P4KE480A	P4KE480CA	456	504	1	408	1	658	0.61	0.110
P4KE510A	P4KE510CA	485	535	1	434	1	698	0.57	0.110
P4KE530A	P4KE530CA	503.5	556.5	1	477	1	725	0.55	0.110
P4KE540A	P4KE540CA	513	567	1	459	1	740	0.54	0.110
P4KE550A	P4KE550CA	522.5	577.5	1	495	1	760	0.52	0.110

Notes: For bidirectional types having V<sub>wm</sub> of 10 Volts and less, the I<sub>R</sub> limit is double.  
For parts without A, the V<sub>BR</sub> is +/- 10%.



TM

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## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 5Kpcs/Reel
Part Number-AP	Ammo Packing: 5Kpcs/Ammo Box
Part Number-BP	Bulk: 50Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А